

ABSTRACT

A piezoelectric transformer including a piezoelectric body which includes a primary portion and a secondary portion, both the primary portion and the secondary portion being able to generate and transform piezoelectric vibrations in accordance with an AC Voltage fed to one portion while a transformed voltage can be delivered from the other portion, the piezoelectric body being constituted by a substantially annular body the primary and secondary portions of which have been polarized substantially perpendicular to the peripheral direction of the annular body, the transformer being adapted to be operated at a resonance frequency of a dimension of a cross-section of the annular body substantially perpendicular to the peripheral direction of the annular body. A piezoelectric transformer including a piezoelectric body which includes a primary portion and a secondary portion, both the primary portion and the secondary portion being able to generate and transform piezoelectric vibrations in accordance with an AC Voltage fed to one portion while a transformed voltage can be delivered from the other portion, the electrodes of one or both portions of the piezoelectric body being embedded in their respective portion, and the piezoelectric material between the respective other portion and the embedded electrode which is closest to that other portion is used as a galvanic separation while still actively participating in the power transfer.